

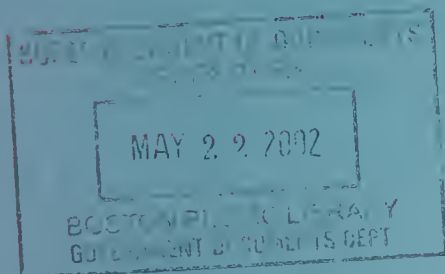


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SUPPLEMENTARY BIBLIOGRAPHY

ON EELGRASS, *Zostera marina*



UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
Special Scientific Report — Wildlife No. 114

UNITED STATES DEPARTMENT OF THE INTERIOR, STEWART L. UDALL, SECRETARY
Stanley A. Cain, Assistant Secretary for Fish and Wildlife and Parks
Fish and Wildlife Service, Clarence F. Pautzke, Commissioner
Bureau of Sport Fisheries and Wildlife, John S. Gottschalk, Director

SUPPLEMENTARY BIBLIOGRAPHY ON EELGRASS, Zostera marina

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SUPPLEMENTARY BIBLIOGRAPHY ON EELGRASS, Zostera marina

ABSTRACT.--This bibliography lists 204 references on eelgrass to supplement an earlier list (Special Scientific Report--Wildlife No. 79) issued in 1964.

INTRODUCTION

This second bibliography of Zostera marina literature adds to the earlier one by R. C. Phillips (U. S. Bureau of Sport Fisheries and Wildlife, Special Scientific Report--Wildlife No. 79). This brings the listing of literature up to 1966. Abbreviations of the names of the journals cited conform to those of the World List of Periodicals for Aquatic Sciences and Fisheries (FAO Fisheries Biology Technical Paper No. 19, Volume 1).

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- ADAMS, D. A.
1963. Factors influencing vascular plant zonation in North Carolina salt marshes. *Ecology* 44(3):445-446.
- ALEXANDER, W. B., B. A. SOUTHGATE, and R. BASSINDALE.
1935. Survey of the River Tees. Part II. The estuary, chemical and biological. Dept. Indust. Res., Water Poll., Tech. Paper No. 5.
- ALLEN, E. J., and R. A. TODD.
1900. The fauna of the Exe Estuary. *J. Mar. biol. Ass. U.K.* 6:295-335.
1900. The fauna of the Salcombe Estuary. *J. Mar. biol. Ass. U. K.* 6:151-217.
- ARISZ, W. H.
1953. Active uptake, vacuole secretion, and plasmatic transport of chloride ions in leaves of Vallisneria spiralis. *Acta bot. neerl.* 7:1-32.
- ARMIGER, L. C.
1964. An occurrence of Labyrinthula in New Zealand Zostera. *N. Z. J. Bot.* 2(1):3-9.
- ARNOLD, A. F.
1901. The sea-beach at ebb-tide. The Century Co., New York. 490 p.
- BAAS BECKING, L. G. M., and E. J. F. WOOD.
1955. Biological processes in the estuarine environment. I and II. Ecology of the sulphur cycle. *Proc. Acad. Sci. Amst. B* 58:160-181.
- BAKER, B. B., JR., W. R. DEEBEL, AND R. D. GEISENDERFER.
1966. Glossary of oceanographic terms. U. S. Naval Oceanogr. Off., Spec. Pub. 35, Washington. 204 p.
- BERTRAND, G., and D. J. PERIETZEANU.
1927. Sur les proportions relatives de potassium et de sodium chez plantes. *C. R. Acad. Sci., Paris.* 184:1616-1618.
- BLEGVAD, H.
1951. Fluctuations in the amounts of food animals of the bottom of the Limfjord in 1928-1950. *Rep. Danish biol. Sta.* 53:3-16.
- BLINOVA, E. I.
1962. Zostera in the Barents sea (in Russian). *Priroda* 51(12):105.
- BORDOVSKIY, O. K.
1965. Accumulation and transformation of organic substances in marine sediments. 3. Accumulation of organic matter in bottom sediments. *Mar. Geol.* 3(1/2):33-82.
- BOWMAN, H. H. M.
1956. Salinity data on marine and inland waters and plant distribution. *Ohio J. Sci.* 56(2):101-106.
- BOYSEN-JENSEN, P.
1919. Valuation of the Limfjord. I. Studies on the fish-food in the Limfjord 1909-1917. *Rep. Danish biol. Sta.* 26:1-44.

BROEKHUYSEN, G. J.

1935. The extremes in percentages of dissolved oxygen to which the fauna of a Zostera field in the tide zone at Nieuwediep can be exposed. Arch. neerl. Zool. 1(3):339-346.

BROWN, C. L.

1962. On the ecology of aufuchs of Zostera marina in Charleston Pond, Rhode Island. M.S. Thesis, Univ. Rhode Island.

BRUIJNS, M. F. M., and Z. SALVERDA.

1965. Survey of marshes and wetlands in the Netherlands. Beaufortia 13(153):47-80.

BURBANCK, W. D., M. E. PIERCE, and G. C. WHITELEY, JR.

1956. A study of the bottom fauna of Rand's Harbor, Massachusetts: an application of the ecotone concept. Ecol. Monog. 26(3):213-243.

BURTON, P. J. K.

1961. The brent goose and its food supply in Essex. The Wildfowl Trust, 12th Ann. Rep. p. 104-112.

1962. The food supplies of Essex brent in the winter of 1960-61. The Wildfowl Trust, 13th Ann. Rep. p. 117-118.

CAREY, A. E., and F. W. OLIVER.

1918. Tidal lands: a study of shore problems. Blackie and Son, Ltd., London.

CARL, G. C.

1963. Guide to marine life of British Columbia. B. C. Prov. Museum, Dep. Rec. Conserv. Handbook No. 21.

CHAPMAN, V. J.

1942. The new perspective in the halophytes. Quart. Rev. Biol. 17(4):291-311.

1952. Seaweeds and their uses. Pitman Pub. Co., London. 287 p.

1964. The Chlorophyta, p. 193-228. In H. Barnes, ed., Oceanography and marine biology, annual review, 2, George Allen & Unwin, Ltd., London.

1964. Coastal vegetation. The Commonwealth & Intl. Library, Bot. Div., Vol. 3. Pergamon Press, Oxford. 245 p.

CLEMENTS, F. E.

1907. Plant physiology and ecology. Holt & Co., New York.

COKER, R. E.

1962. This great and wide sea. Harper and Bros., New York. 325 p.

CONOVER, J. T.

1961. Plant relationships in coastal ponds. 1st. Natl. Coastal Shallow Water Res. Conf. p. 109-110.

CONOVER, R. J.

1961. A study of Charlestown and Green Hill Ponds, Rhode Island. Ecology 42(1):119-139.

- COTTAM, C., J. LYNCH, and A. I. NELSON.
1944. Food habits and management of the sea brant. J. Wildlife Mgt. 8:36-46.
- CROIZAT, L.
1952. Manual of phytogeography. Uitgeverij Dr. W. Junk, The Hague. 587 p.
- DANDY, J. E.
1958. List of British vascular plants. Brit. Museum (Nat. Hist.), London.
- DARLINGTON, C. D., and E. K. J. AMMAL.
1945. Chromosome atlas of cultivated plants. George Allen & Unwin, Ltd., London. 397 p.
- DARLINGTON, C. D., and K. SAX.
1962. Chromosome numbers: spermatophytes. In P. L. Altman and D. S. Dittmer, eds., Growth including reproduction and morphological development. Fed. Proc. 1962.
- DAWSON, E. Y.
1960. Symposium: The biogeography of Baja California and adjacent seas. II. Marine biotas. A review of the ecology, distribution, and affinities of the benthic flora. Syst. Zool. 9(3):93-100.
- DEGINA, R.
1957. Hydrological surveying of the Bay of Adjibai of Aral Sea in 1953 (in Russian). Trud. Lab. Ozeroved. Akad. Nauk SSSR.
- DENSON, E. P., Jr., and S. L. MURRELL.
1962. Black brant populations of Humboldt Bay, California. J. Wildlife Mgt. 26(3):257-262.
- DERJUGIN, K.
1928. Fauna des Weissen Mecres and ihre Existengbedingungen. Issled. Mor. SSSR. 7-8.
- DIELS, L.
1942. Die stamme des pflanzenreichs. Handbuch der Biologie, IV. Die pflanze, Akad. Verlag. Athenanaian, Potsdam.
- DOTY, M. S., and J. G. ARCHER.
1950. An experimental test of the tide factor hypothesis. Amer. J. Bot. 37(6):458-464.
- DUFF, S., and J. M. TEAL.
1965. Temperature change and gas exchange in Nova Scotia and Georgia salt-marsh muds. Limnol. Oceanogr. 10(1):67-73.
- EINARSEN, A. S.
1965. Black Brant: sea goose of the Pacific Coast. Univ. Wash. Press, Seattle. 142 p.
- EMERY, K. O.
1960. The sea off southern California. John Wiley & Sons, New York. 366 p.

- EMERY, K. O., R. E. STEVENSON, and J. W. HEDGEPEETH.
1957. Estuaries and lagoons p. 673-749. In J. W. Hedgepeth, ed.,
Treatise on marine ecology and paleoecology, I. Geol. Soc. Amer.,
Mem. No. 67.
- ENDE, G. van den, and P. HAAGE.
1963. Beobachtungen über den epiphytenbewuchs von Zostera marina L.
an der bretonischen kuste. Bot. mar. 5(4):105-110.
- EVANS I. O.
1962. The observers book of sea and seashore. Frederick Warne & Co.,
Ltd., London. 253 p.
- FISCHER-PIETTE, E., R. HEIM, and R. LAMI.
1932. Note preliminaire sur une maladie bactérienne des Zosteres.
C. R. Acad. Sci., Paris. 195:1420-1422.
- FOWLER, G. H., and E. J. ALLEN, ed.
1928. Science of the sea. Claredon Press, Oxford. 502 p.
- FRITSCH, C. R.
1896. Veber die auffindung einer marinen Hydrocharidee im mittelmeeer.
Verh. Zool.--bot. Ges. Wien. 45:104-106.
- FUSE, S., T. HABE, E. HARADA, R. OKUNO, and T. MIURA.
1959. The animal communities in the submerged marine plant vegetations.
Bull. Mar. biol. Sta. Asamushi. 9(4):173-175.
- GAEVSKAYA, N. W., ed.
1948. Opredelitel fauni i flori severnikh moryi SSSR (in Russian).
Sov'yetskaya Nauka, Moskva. 737 p.
- GARDNER, N. L.
1927. New Rhodophyceae from the Pacific coast of North America, II.
Univ. Calif. Pub. Bot. 13(13):235-272.
- GISLEN, T.
1929. Epibioses of the Gullmar Fjord I. Kristinebergs Zool. Sta.
1877-1927, N:R 3:1-123.
1930. Epibioses of the Gullmar Fjord II. Kristinebergs Zool. Sta.
1877-1927, N:R 4:1-380.
- GLUCK, H.
1901. Die stipulargebilde der monokotyledonen. Verh. d. Naturhist.
Med. Vereins zu Heidelberg, N. F. 7(1):1-96.
- GOOR, A. C. J. van.
1921. Die Zostera-Assoziation des holländischen Wattenmerres. Rec.
Trav. Bot. neerl. 18:103-121.
- GRISEBACH, PROF.
1846. On botanical geography. Rep. Bot., Ray Soc. London. 6:55-212.
- GRØNTVED, J.
1957. A sampler for underwater macrovegetation in shallow waters.
J. Cons. 22(3):292-297.

1958. Underwater macrovegetation in shallow coastal waters. J. Cons. 24(1):32-42.
1960. Taxonomical and productional investigations in shallow coastal waters. Medd. Danm. Fisk. Havundersøg. 3:55-92.
- GRØNTVED, J., and E. STEEMANN NIELSEN.
1957. Investigations on the phytoplankton in sheltered Danish marine localities. Medd. Danm. Fisk. Havundersøg. Plankton, 5(6):1-52.
- GUTSELL, J. S.
1931. Natural history of the bay scallop. Bull. Bur. Fish. 1930, 46:569-639.
- HABE, T.
1958. A study on the productivity of the Tanabe Bay (part I). VI. Zonal arrangement of intertidal benthic animals in the Tanabe Bay. Rec. oceanogr. Wks. Jap. 2:43-49.
- HARADA, I.
1942. Chromosome studies on Potamogeton (in Japanese). Jap. J. Genet. 18(2):92.
- HARTOG, C. den.
1959. The epilithic algal communities occurring along the coast of the Netherlands. Wentia 1:1-240.
- HAYDOCK, C. F.
1960. A survey of Morro Bay eelgrass, June through August. Rep. Calif. Fish Game, Mar. Res. Operations, Stanford. 5 p.
- HAYES, F. R.
1964. The mud-water interface, p. 121-145. In H. Barnes, ed., Oceanography and marine biology, annual review, 2. George Allen & Unwin, Ltd., London.
- IRMISCH, T.
1851. Über die inflorescenzen der deutschen potameen. Flora, 6:81-93.
- ISHIBASHI, M., and T. YAMAMOTO.
1959. Chemical studies on the seaweeds. III. The content of ash, sodium, and potassium in seaweeds. Rec. oceanogr. Wks. Jap., Spec. No. 3:109-115.
1960. Chemical studies on the seaweeds. VII. Iron content in seaweeds. Rec. oceanogr. Wks. Jap., Spec. No. 4:79-85.
- JEFFERIES, H. P.
1961. Environmental relationships of benthic biota in coastal ponds. 1st. Natl. Coastal Shallow Water Conf. p. 107-109.
- JEPSON, W. L.
1951. A manual of the flowering plants of California. Univ. Calif. Press. 1238 p.

- JONES, N. S.
1950. Marine bottom communities. Biol. Rev. 25:238-313.
- JORGENSEN, C. A., T. SORENSEN, and M. WESTERGAARD.
1958. The flowering plants of Greenland. A taxonomical and cytological survey. Dansk. Vidensk. Selsk. Biol. Skr. 9:1-172.
- JOSHI, G., T. DOLAN, R. GEE, and P. SATMAN.
1962. Sodium chloride effect on dark fixation of CO₂ by marine and terrestrial plants. Plant Physiol. 37(3):446-449.
- KELLER, M.
1963. Growth and distribution of eelgrass (Zostera marina L.) in Humboldt Bay, California. M.S. Thesis, Humboldt State Coll. 53 p.
- KELLER, M., and S. W. HARRIS.
1966. The growth of eelgrass in relation to tidal depth. J. Wildlife Mgt. 30(2):280-285.
- KIKUCHI, T.
1961. An ecological study on animal community of Zostera belt in Tomioka Bay, Amakusa, Kyushu. Community composition. (1) Fish fauna. Rec. oceanogr. Wks. Jap., Spec. No. 5:211-223.

1962. An ecological study on animal community of Zostera belt in Tomioka Bay, Amakusa, Kyushu. Community composition. (2) Decapod crustaceans. Rec. oceanogr. Wks. Jap., Spec. No. 6:135-146.
- KITA, T., and E. HARADA.
1962. Studies on the epiphytic communities. I. Abundance and distribution of microalgae and small animals on the Zostera blades. Publ. Seto Mar. biol. Lab., Kyoto Univ., 10(2):245-257.
- KITAMORI, R.
1963. Studies on the benthos of littoral areas in the Seto-Inland Sea and adjacent waters (in Japanese). Bull. Naikai Fish. Res Lab. 21:1-90.
- KNIGHT, J. B.
1934. A salt marsh study. Amer. J. Sci. 28:161-181.
- KOLETOVA, G. A.
1963. Observations on Zostera in Chupa Bay (in Russian). Prob. Ispolzovanii Promyslovykh Resursov Belogo Moria Vnutrennykh Vodoemov Karelii, Moskva. Vyp. 1:149-152.
- KORNAS, J.
1959. Seabottom vegetation of the Bay of Gdansk off Rewa. Bull. Acad. polon. Sci., Ser. Sci. Biol., Cl 2. 7(1):5-10.
- KUNTH, C. S.
1841. Enumeratio plantarum. Tom III.
- KURATA, H.
1963. Ecology of shrimps on the eelgrass bed. 1. Spirontocaris propugnatrix (in Japanese, English abstract). Bull. Hokkaido Fish. Res. Lab. 26:81-85.

1963. Ecology of shrimps on the eelgrass bed. 2. Leander macrodactylus and others. Bull. Hokkaido Fish. Res. Lab. 26:86-91.
1963. Ecology of shrimps on the eelgrass bed. 3. Shrimps in relation to their environment. Bull. Hokkaido Fish. Res. Lab. 26:92-96.
- KUZNETSOV, V. V., and T. A. MATVEEVA.
1963. Biological features of Zostera of the White Sea (in Russian). Prob. Ispolzovaniy Promyslovykh Resursov Belogo Moria Vnutrennykh Vodoemov Karelii, Moskva. Vyp., 1:145-149.
- LACKEY, J. B.
1964. The ecology of plankton algae. In Algae and man, D. F. Jackson, ed., Lectures presented at NATO Advanced Study Inst. Plenum Press, New York.
- LEAVITT, R. G.
1904. Trichomes of the root in vascular cryptogams and angiosperms. Proc. Boston Soc. nat. Hist. 31:273-313.
- LEDOYER, M.
1964. La Fauna vagile des herbiers de Zostera marina et de quelques biotopes d'algues infralittorales dans la zone inter-tidal en manche et comparaison avec des milieux mediterraniens identiques. Rec. Trav. Sta. mar. Endoume 34(50):227-247.
- LE DANOIS, E.
1957. Marine life of coastal waters (western Europe). G. G. Harrap and Co., Ltd., London. 119 p.
- LEOPOLD, A.S., and R. H. SMITH.
1953. Numbers and winter distribution of Pacific black brant in North America. Calif. Fish Game 39(1):95-101.
- LEWIS, J. R.
1964. The ecology of rocky shores. English Univ. Press, London. 323 p.
- LÖVE, A. and D. LÖVE.
1942. Chromosome numbers of scandinavian plant species. Bot. notiser. 1942:19-59.

1948. Chromosome numbers of northern plant species. Univ. Inst. Appl. Sci., Dep. Agr., Series B, No. 3:1-131.

1956. Cytotaxonomical conspectus of the Icelandic flora. Acta Horti Gotoburg 20:65-291.
- LUND, S.
1941. Tangforekomsterne i de danske farvande og mulighe derne for deres udnyttelse. Dansk. Tidsskr. F. Farmaci 15(6).
- LUBIMENKO, M. V.
1908. Action specifique des rayons lumineux de diverses couleurs dans la photosynthesis. C. R. Acad. Sci., Paris. 177:606.

1928. Recherches sur les pigments des plastes et sur la photosynthesis. III. La biologie de la photosynthesis. Rev. gen. Bot. 40:415-442.
- MARGALEF, R.
1963. Secession in marine populations. In R. Vira, ed., Advancing frontiers of plant sciences, 2:127-188.
- MARSHALL, S. M., and A. P. ORR.
1948. Further experiments on the fertilization of a sea loch (Loch Craigh). The effect of different plant nutrients on the phytoplankton. J. Mar. biol. Ass. U.K. 7(2):360-379.
- MAYERS, A. G.
1906. Sea-shore life. A. S. Barnes and Co., New York. 181 p.
- MCROY, C. P.
1966. The standing stock and ecology of eelgrass, Zostera marina, in Izembek Lagoon, Alaska. M. S. Thesis, Univ. Wash., Seattle. 138 p.
- MEDCOF, J. C.
1961. Oyster farming in the Maritimes. Fish. Res. Bd. Canada, Ottawa. Bull. 131, 158 p.
- MERTENS, B.
1830. Flora d. koragins Insl. Linnaea 5:60-71.
- MEYEN, F. J. F.
1847. Outlines of the geography of plants. Ray Soc., London. 7:1-422.
- MEYERS, S. P.
1965. Physiology and ecology of the marine fungi. Report, ONR, Microbiology Branch, 10 p.
- MIKI, S.
1937. The origin of Najas and Potamogeton. Bot. Mag., Tokyo 51:290-480.
- MILLER, W. R., and F. E. EGLER.
1950. Vegetation of the Wequetequack-Pawcatuck tidal-marshes, Connecticut. Ecol. Monog. 20:143-172.
- MOFFITT, J.
1941. 11th annual black sea brant census in California. Calif. Fish Game 27(4):216-233.

1943. 12th annual black sea brant census in California. Calif. Fish Game 29(1):19-28.
- MOLINIER, R. et J. PICARD.
1953. Recherches analytiques sur les puplements littoraux se developpant sur substrat solide. Rec. Trav. Sta. mar. Endoume 9(4).
- MOROSOVA-VODYANITSKAYA N.
1938. Zostera as an object of industry in the Black Sea (in Russian). Priroda, No. 8.

1939. The epidemic disease of a marine grass--Zostera in the Black Sea (in Russian). Priroda, No. 1.
1941. Materials bearing on the vegetative productivity of the Black Sea (in Russian). Trud. zool. Inst. Akad. Nauk SSSR 7(2):E.S.
- MURIE, O., and V. B. SCHEFFER.
1959. Fauna of the Aleutian Islands and Alaska Peninsula. U.S. Fish Wildlife Serv., No. Amer. Fauna, No. 61. 406 p.
- MURRAY, J., and J. HJORT.
1912. Depths of the ocean. MacMillan Co., London. 821 p.
- NACCARI, F. L.
1826. Flora reneta descrizione delle piante che nascono nella provincia di Venezia, Venezia.
- NEUSHUL, M.
1965. SCUBA diving studies of the vertical distribution of benthic marine plants. Botanica Gothoburgensia III, Proc. 5th Mar. Biol. Symp., Goteborg. 161-176.
- NICHOL, E. A. T.
1935. The ecology of a salt marsh. J. Mar. biol. Ass. U.K. 20:203-261.
- NILSSON, L., and G. JAGERSTEN.
1964. Life in the sea. Basic Books, Inc., New York. 184 p.
- OGATA, E., and M. OGATA.
1965. Photosynthesis in several marine plants of Japan as affected by salinity, drying, and pH, with attention to their growth habitats. Bot. mar. 8(2-4):199-217.
- OGELSBY, R. T.
1965. Survey of the intertidal zone and related environment in the vicinity of the Ferndale, Washington refinery for the Mobil Oil Co. Report, Mobil Oil Co., unpubl. MS.
- OHSHIMA, Y.
1954. On Zostera belt and conservation juvenile fishes (in Japanese). Suisangatu no Gaikan, Tokyo. 128-166.
- OSTENFELD, C. H.
1917. Havgraesseeenes udbredelse i verdensharene. Naturen 41:1-14, 33-34.
1918. Report on the Danish oceanographical expeditions 1908-1910 to the Mediterranean and adjacent seas. Biology, Vol. 2, Seagrasses, t. 2:16.
- OUTRAM, D. N.
1956. Amount of herring spawn deposited in British Columbia coastal waters in 1956. Fish. Res. Bd. Canada, Pac. Biol. Sta., Nanaimo, B. C., Circ. No. 42: 13 p.
1959. The extent of the 1959 herring spawning in British Columbia coastal waters. Fish. Res. Bd. Canada, Pac. Biol. Sta., Nanaimo, B. C., Circ. No. 56: 13 p.

1961. The propagation of herring (Clupea pallasii) in the coastal waters of British Columbia, with a summary of spawning success in 1960. Fish. Res. Bd. Canada, Pac. Biol. Sta., Nanaimo, B. C., Circ. No. 60: 17 p.
1961. The multitudinous Pacific herring. Fish. Res. Bd. Canada, Pac. Biol. Sta., Nanaimo, B. C., Circ. No. 63: 15 p.
1962. The extent of herring spawning in British Columbia in 1962. Fish. Res. Bd. Canada, Pac. Biol. Sta., Nanaimo, B. C., Circ. No. 69: 12 p.
1963. The extent of herring spawning in British Columbia in 1963. Fish. Res. Bd. Canada, Pac. Biol. Sta., Nanaimo, B. C., Circ. No. 70: 11 p.
- PARCHEVSKY, V. P.
1965. Radionuclides of cesium, ruthenium, and zirconium in plants and animals in the Black Sea (in Russian). Okeanologiya 5(5):856-862.
- PENFOUND, W. T.
1956. Primary production of vascular aquatic plants. Limnol. Oceanogr. 1(2):91-101.
- PERES, J. M., and J. PICARD.
1955. Biotopes et biocoenoses de la Mediterranean Occidentale compares a ceux de la Manche et de l'Atlantique Nord-Oriental. Arch. Zool. exper. gen. 92:1-72.
- PHILLIP, G.
1936. An enalid plant association in the Humber estuary. J. Ecol. 24(1):205-219.
- PHILLIPS, J. C.
1932. Fluctuations in numbers of the eastern brant goose. The Auk 49(4):445-453.
- PHILLIPS, R. C.
1963. Ecology of floating algal communities in Florida. Quart. J. Fla. Acad. Sci. 26(4):329-334.

1964. Comprehensive bibliography of Zostera marina. U.S. Fish Wildlife Serv., Bur. Sport Fish Wildlife, Spec. Sci. Rep., Wildlife No. 79. 35 p.
- PHILLIPS, R. C., and S. GRANT
1965. Environmental effect on Phyllospadix scouleri Hooke and Zostera marina L. leaves. Abst. 16th Ann. AIBS Meet.
- PICCONE, A.
1885. I pesci fitofagi e la disseminazione delle alghe. Nouv. Giorn. Bot. Ital. 17:150-158.
- POLUNIN, N.
1940. Botany of the Canadian eastern Arctic. Part I. Pteridophyta and Spermatophyta. Natl. Museum Canada, Bull. 92, 408 p.

- RANWELL, D. S.
1964. 10. Conservation and management of estuarine marsh in relation to Spartina marsh in the British Isles. Proc. MAR Conf., IUCN Pub., New Series 3(1):281-287.
- RANWELL, D. S., and B. M. DOWNING.
1959. Brent goose winter feeding pattern and Zostera resources at Scott Head Island, Norfolk. Anim. Behav. 7:42-56.
- RASMUSSEN, R.
1952. Foroya flora, 2nd ed. Torshavn, the Faeroes.
- RAYMONT, J. E. G.
1963. Plankton and productivity in the oceans. MacMillan Co., New York. 660 p.
- RIEDL, R., ed.
1963. Fauna & flora der Adria. Verlag P. Pövey, Berlin. 640 p.
- RIGG, G. B.
1942. Plant resources of the sea along the Northwest coast and Alaska. Calif. Fish Game 28(4):206-209.
- RØRDAM, K.
1917. Kemisk undersøgelse af baendeltang Fra danske Farvande (English summary). K. Vet. Landbohøjsk. Aarskr. 1917. Copenhagen.
- RUSSELL, F. S., and C. M. YONGE.
1963. The seas. Frederick Warne and Co., Ltd., London. 376 p.
- RYTHER, J. H.
1956. The measurement of primary production. Limnol. Oceanogr. 1(2):72-84.
- SANDO, H.
1964. Faunal list of the Zostera marina region at Kugurizaka coastal waters Aomori Bay. Bull. Mar. biol. Sta. Asamushi. 12(1):27-36.
- SAVENKOV, M. J.
1910. Materials on the study of the ecology and morphology of the Zostera environment (in Russian). Sevastopol. Ezd. Bot. Inst., Kharkov.
- SCAGEL, R. F.
1959. The role of plants in relation to animals in the marine environment. Marine Biology, Proc. 20th Ann. Biol. Coll., Oregon State College.

1961. Ecology of marine algae. A synthetic approach to some problems in marine algal ecology. In Recent advances in botany., Univ. Toronto Press, Toronto.
- SEGAWA, S., T. SAWADA, M. HIGAKI, T. YOSHIDA, and S. KAMURA.
1961. Studies on the floating seaweeds. VI. The floating seaweeds of the West Kyushu region (in Japanese, English summary). Sci. Bull. Fac. Agric., Kyushu. 18(4):411-417.

1961. The floating seaweeds of the sea to the west of Kyushu. Rec. oceanogr. Wks. Jap., Spec. No. 5, 179-183.
- SEIBOLD, E.
1963. Geological investigation of near-shore transport--examples of methods and problems from Baltic and North Seas, p. 3-70. In M. Sears, ed., Progress in oceanography, vol. 1. Macmillan Co., New York.
- SETCHELL, W. A., and N. L. GARDNER.
1920. The marine algae of the Pacific coast of North America. Part II, Chlorophyceae. Univ. Calif. Publ. Bot., 8(2):139-374.
1920. Phycological contributions, I. Univ. Calif. Publ. Bot. 7(9):279-324.
1922. Phycological contributions, II. Univ. Calif. Publ. Bot. 7(11):334-352.
1922. Phycological contributions, V. Univ. Calif. Publ. Bot. 7(11):385-402.
1922. Phycological contributions, VI. Univ. Calif. Publ. Bot. 7(11):403-426.
1935. An occurrence of Zostera on the east coast of South America. Rev. sudamer. Bot. 2:15-17.
- SMAYDA, T. J.
1961. Some quantitative aspects of primary production in a Rhode Island coastal salt pond. 1st Natl. Coastal Shallow Water Res. Conf., p. 123-125.
- SPARCK, R.
1935. On the importance of quantitative investigation of the bottom fauna in marine biology. J. Cons. 10(1):3-19.
- STEEMANN NEILSEN, E.
1951. The marine vegetation of the Isefjord. Medd. Danm. Fisk. Havundersøg., Plankton 5(4):1-114.
- STEINBECK, J., and E. RICKETTS.
1941. Sea of Cortez. Viking Press, New York. 598 p.
1951. The log from the Sea of Cortez. Viking Press, New York. 282 p.
- STEPHENSON, E. M.
1951. The naturalist on the seashore. Adam & Charles Black, London. 96 p.
- STEVENSON, R. E.
1954. The marshlands at Newport Bay, California. Ph.D. Thesis, Univ. So. Calif., 199 p.
- STEVENSON, R. E., and K. O. EMERY.
1958. Marshlands at Newport Bay, California. Allan Hancock Foundation Pub., Occ. Paper 20:109 p.

- SUTCLIFFE, J. F.
1962. Mineral salts absorption in plants. Int. series of monographs on pure and applied biology. Pergamon Press, New York. 194 p.
- TAYLOR, W. R.
1933. Epidemic among Zostera colonies. Rhodora 35:186.
- TITCOMB, J. W.
1909. Aquatic plants in pond culture. In Rep. Comm. Fish. 1907 and Spec. Papers., Bur. Fish. Doc. 643. 31 p.
- TECHET, K.
1906. Veber die marine vegetation des Triester Golfes. Abh. K. K. Zool. bot. Ges. Wien. 4(3):17.
- TEST, A. R.
1945. Ecology of California Acmaea. Ecology 26(4):395-405.
- THORSON, G.
1957. Bottom communities, p. 461-534. In J. W. Hedgepeth, ed., Treatise on marine ecology and paleoecology, I. Geol. Soc. Amer., Mem. 67.
- TRESSLER, D. K., and J. M. LEMON.
1951. Marine products of commerce. Reinhold Pub. Corp., New York. 782 p.
- TWENHOFEL, W. H.
1932. Treatise on sedimentation. Williams and Wilkins Co., Baltimore. 926 p.
- UHL, N. W.
1947. Studies in the floral morphology and anatomy of certain members of the Helobiae. Ph.D. Thesis. Cornell Univ. Ithaca.
- VEVERS, H. G.
1954. The British seashore. Rootledge and Kegan Paul, Ltd., London. 160 p.
- VINOGRADOV, A. P.
1953. The elementary chemical composition of marine organisms (translated from Russian). Mem. Sears Foundation, Mar. Res. 2(14):647p.
- VODYANITZKY, V.
1941. Contribution a la connaissance de la production biologique de la Mer Noire. Trud. zool. Inst. Akad. Nauk SSSR 7(2) ES.
- VOLOVA, G. N., and L. V. MIKULICH.
1963. Biology and distribution of the grass shrimp in Peter the Great Bay. Uchen. Zap. Dal'nevostochnyi Universitet 6:147-148.
- VOZZHINSKAYA, V. B.
1964. The bottom flora of Sakhalin (in Russian, English summary). Trud. Inst. Okeanol., Akad. Nauk SSSR. 69:330-440.

- WADDELL, J. E.
1964. The effect of oyster culture on eelgrass (Zostera marina L.) growth. M.S. Thesis, Humboldt State Coll. 48 p.
- WALSH, G. E.
1965. Studies on dissolved carbohydrate in Cape Cod waters. I. General survey. Limnol. Oceanogr. 10(4):570-576.
- WALTER, H.
1961. Grundlagen des pflanzensystems. Einfuhrung in die Pytologie, II. Eugen Ulmer, Stuttgart. 280 p.
- WIDDOWSON, T. B.
1965. A survey of the distribution of intertidal algae along a coast transitional in respect to salinity and tidal factors. J. Fish. Res. Bd. Canada. 22(6):1425-1454.
- WOOD, E. J. F.
1954. Reducing substances in Zostera. Nature 172:916.

1962. The microbiology of estuaries, p. 20-26. In N. Marshall, ed., The environmental chemistry of marine sediments. Occ. Pub. No. 1, Grad. School Oceanogr., Univ Rhode Island.

1965. Marine microbial ecology. Reinhold Corp., New York. 243 p.
- WUITNER, E.
1946. Les algues marines des cotes de France. Paul Lechevalier, Paris, 127 p. 2nd ed. (Encyclopedie Pratique Du Naturaliste).
- YOCOM, C. F., and E. P. DENSON, Jr.
1962. Importance of northwest coastal California to waterfowl. Calif. Fish Game 48(1):65-76.
- YOKOM, F. C., and M. KELLER.
1960. Correlation of food habits and abundance of waterfowl in Humboldt Bay, California. Calif. Fish Game 47(1):41-53.
- YOSHIDA, T.
1963. Studies on the distribution and drift of the floating seaweeds. Bull. Tohoku Fish. Res. Lab. 23:141-186.
- YOUNGE, C. M.
1949. The sea shore. Collins, London. 311 p.
- ZENKEVITCH, L. A.
1963. Biology of the seas of the U.S.S.R. Interscience Pub., New York. 955 p.
- ZERNOV, S.
1913. On the question of the knowledge of the life of the Black Sea (in Russian). Zap. Akad. Nauk SSSR 8, 32, 1.

